Arizona's Education Transformation



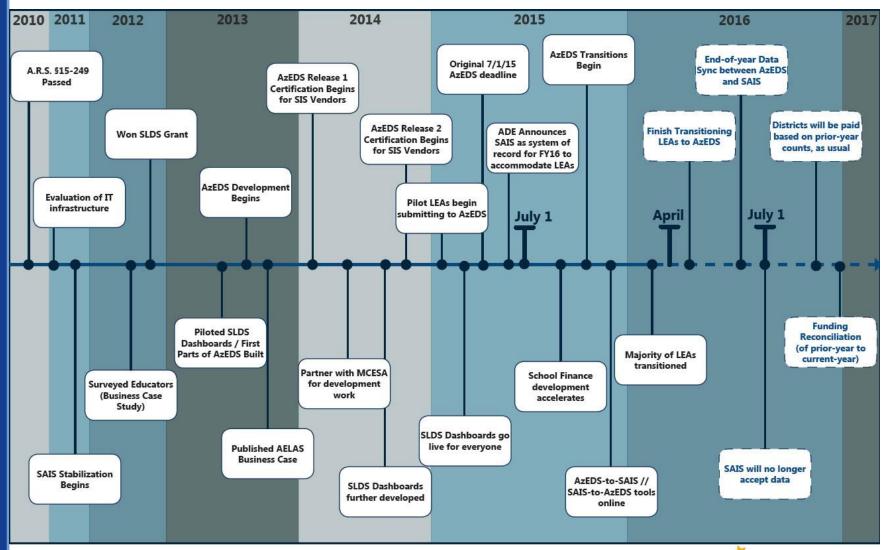
Presented to:

Arizona State Board of Education May 23, 2016

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Chief Information Officer

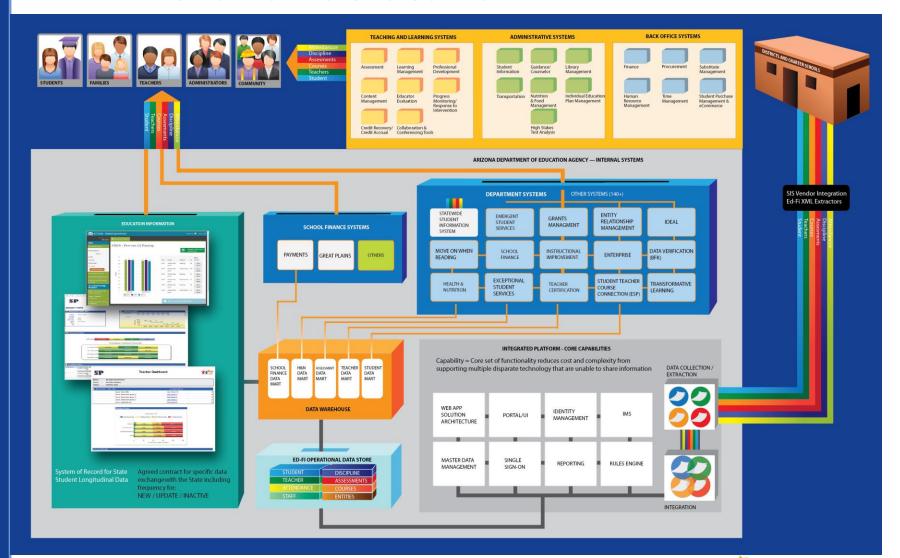


AELAS historical perspective





AELAS archeticture



FY16 recap and deliverables

- Emphasis on completing Student portion of SAIS replacement
 - 78% of student population now submitting to AzEDS
 - AzEDS becomes system of record in FY17
 - Deployed new School Finance processing engine
- Continue rollout of Statewide Student Information System
- Ongoing technical support for AELAS tools
 - ADEConnect, AZDash, SSIS, AzEDS support personnel
 - Ensures education community of state's commitment to sustainability



What was tabled in FY16

- Integrating existing systems that use SAIS for data
- 1-year implementation for SAIS replacement
- New dashboards for AZ Dash
- Adequate software/hardware needs for AELAS development
- Roll out of Opt-in Teaching and Learning tools that have been developed



FY12-16 budget expenditures

Project	FY2012	FY2013	FY2014	FY2015	FY2016	Project Spend Total
SAIS Replacement	\$2,817,422	\$2,978,442	\$2,012,168	\$3,791,082	\$1,629,175	\$13,228,291
School Finance	\$0	\$577,633	\$771,427	\$1,222,344	\$1,367,224	\$3,938,627
SLDS	\$986,236	\$716,800	\$1,048,242	\$1,884,615	\$0	\$4,635,893
SSIS	\$0	\$64,724	\$176,316	\$808,783	\$660,373	\$1,710,195
Production Support	\$316,440	\$2,115,858		\$3,407,485	\$3,689,137	\$12,035,935
Teacher Tool (LMS, CMS, etc.)	\$0	\$298,366	\$403,613	\$611,983	\$76,022	\$1,389,983
FY Total	\$4,120,099			\$11,726,292	*as of 4/30/16	\$36,938,925



What was said about the transition

- Notified ASCUS that the transition was deferred on 4/23/15 allowing LEAs to adjust
 - Avoiding the big bang rollout we were heading towards
 - Moving from SAIS to AzEDS is not optional
- Outlined to the difficulties at the ASCUS meeting on 9/17/15
- Everyone from the legislature, to ADE, to ASCUS to the students are in this together
 - Support is in place
- Communicated that it will take time



Letter to LEAs in March 2016

- Reiterated that all LEAs must complete transition from SAIS to AzEDS by June 30, 2016
 - Extended using SAIS as system of record for one year
- 78% of state already transitioned and the legislature already invested too much to turn around
- The transition to SAIS years ago was far worse
 - All schools received payments back then!
 - We are ahead of where we were then (auditors agree)
- These two systems were never going to match!
 - Working on a solution to get to 99%



Transition to AzEDS (all metrics as of April 26)

				Counts for L	EAs migrat	ting to AzEDS			
Status Description	(Multiple Items) 🗷		Closed, Future, or	Inactive LEAs fil	tered				
4/26/16	Data from 5 AM								
		% of total	In	%	LEAs	% Implementation	% of Total	Incomplete	Notyet
Row Labels	LEAs	Students	Implementation	Implementing	Submitting	complete	submitting	Implementations	Implementing
 ■Apex	6	0.41%	6	0 100%	6	0 100%	100 %	0	0
■ AZDJC	1	0.07%	1	0 100%	1	0 100%	100 %	0	0
 Connexus	1	0.49%	1	0 100%	1	100%	100%	0	0
■Edupoint	91	33.00%	43	O 47%	33	77%	47%	10	48
■FlipSwitch	1	2.07%	1	0 100%	1	100%	100 %	0	0
■ Hane Solutions	10	0.21%	10	0 100%	10	100%	100%	0	0
 ■Illuminate	2	3.42%	2	0 100%	2	100%	100 %	0	0
■ InfiniteCampus	13	0.49%	7	O 54%	5	71%	S4%	2	6
■JupiterEd	2	0.04%	2	0 100%	2	100%	100 %	0	0
 PowerSchool	166	37.28%	159	96%	153	96%	96%	6	7
 Schoolmaster	318	24.50%	263	83%	236	90%	83%	27	55
■Statewide SIS	47	1.10%	22	O 47%	22	100%	47%	0	25
Tyler V10	1	2.63%	1	0 100%	1	100%	100 %	0	0
 Unknown	1	0.00%	-	0%	-	0 %	O%	0	1
Grand Total	660	100.00%	518	78 %	473	91%	78 %	45	142
		+ 3 LEAs	for Yesterday		+ 3 LEAs fo	r the week			
							Green Highlights	changes from last re	eport



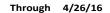
AzEDS metrics by vendor (as of 4/26/16)

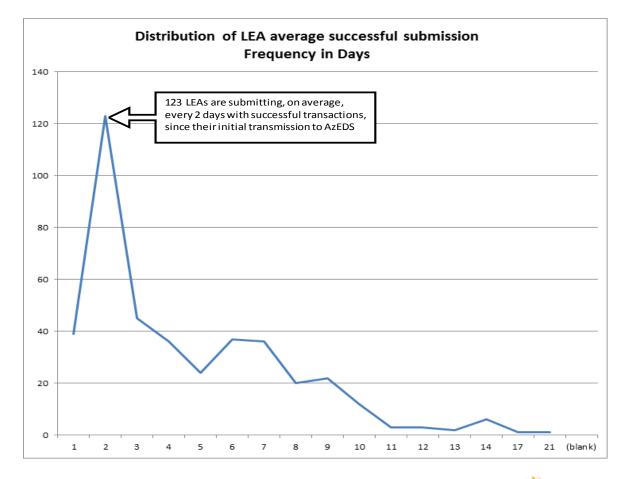
Vendors	Vendor % to total Students	Vendor % Students on AzEDS	Vendor % Students on SAIS
Apex	0.20%	0.20%	0.00%
AZDJC	0.03%	0.03%	0.00%
Connexus	0.23%	0.23%	0.00%
Edupoint	39.72%	16.00%	23.72%
FlipSwitch	0.99%	0.99%	0.00%
Hane Solutions	0.10%	0.10%	0.00%
Illuminate	1.64%	1.64%	0.00%
InfiniteCampus	13.14%	0.24%	12.91%
JupiterEd	0.02%	0.02%	0.00%
PowerSchool	19.27%	18.27%	1.00%
Schoolmaster	15.19%	12.47%	2.71%
Statewide SIS	7.77%	0.52%	7.24%
Tyler V10	1.26%	1.26%	0.00%
Unknown	0.43%	0.43%	0.00%
Grand Total	100.00%	52.41%	47.59%
		100.00%	



Frequency of submission to AzEDS

Ave. Freq. of Submission by LEAs	Count of LEAs
1	39
2	123
3	45
4	36
5	24
6	37
7	36
8	20
9	22
10	12
11	3
12	3
13	2
14	6
17	1
21	1
(blank)	
Grand Total	410

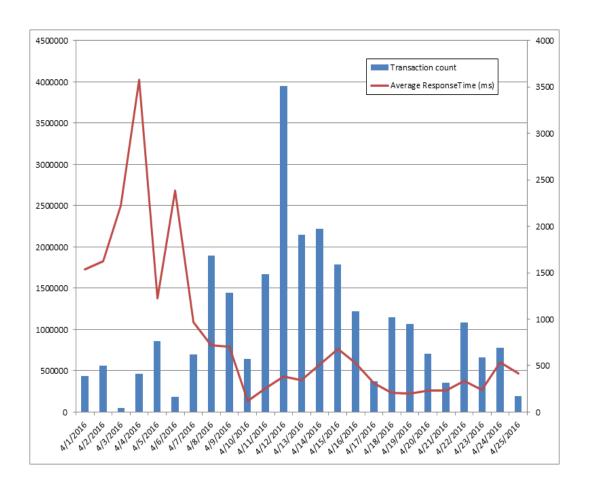






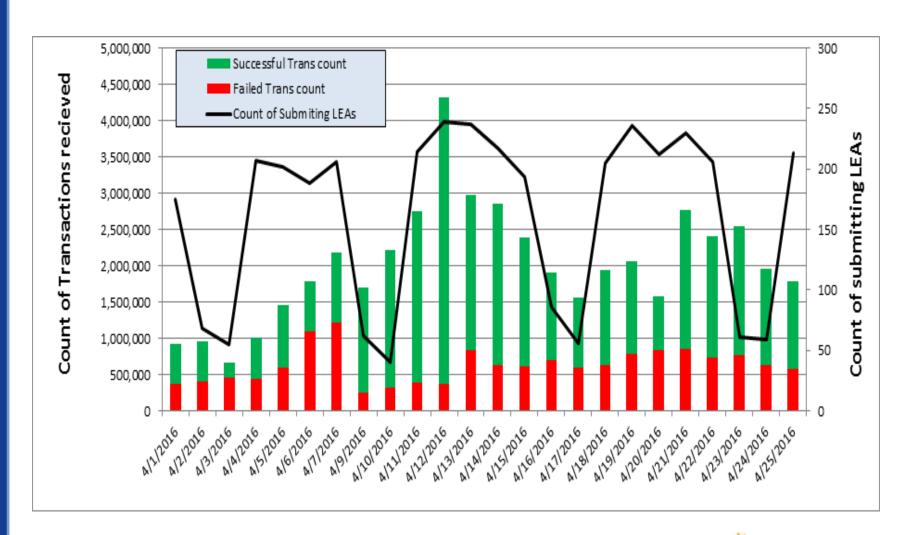
Response time to AzEDS submission

	Transaction	
Row Labels	count	Average ResponseTime (ms)
4/1/2016	433496	1533.695652
4/2/2016	560733	1626.434783
4/3/2016	44433	2228
4/4/2016	458699	3577.869565
4/5/2016	863696	1221.130435
4/6/2016	181296	2383.565217
4/7/2016	696730	966.4782609
4/8/2016	1895408	722.4782609
4/9/2016	1440731	706.8695652
4/10/2016	643946	118.8695652
4/11/2016	1673557	257.4347826
4/12/2016	3946459	384.8333333
4/13/2016	2151577	344.0833333
4/14/2016	2221272	512.0638298
4/15/2016	1789320	676.75
4/16/2016	1216798	525.24
4/17/2016	370356	315.2222222
4/18/2016	1151030	206.0434783
4/19/2016	1063546	200.8695652
4/20/2016	709310	233.0416667
4/21/2016	353027	228
4/22/2016	1082409	336
4/23/2016	658755	239.2608696
4/24/2016	778405	535.8636364
4/25/2016	196979	417.777778
Grand Total	26581968	814.0635739



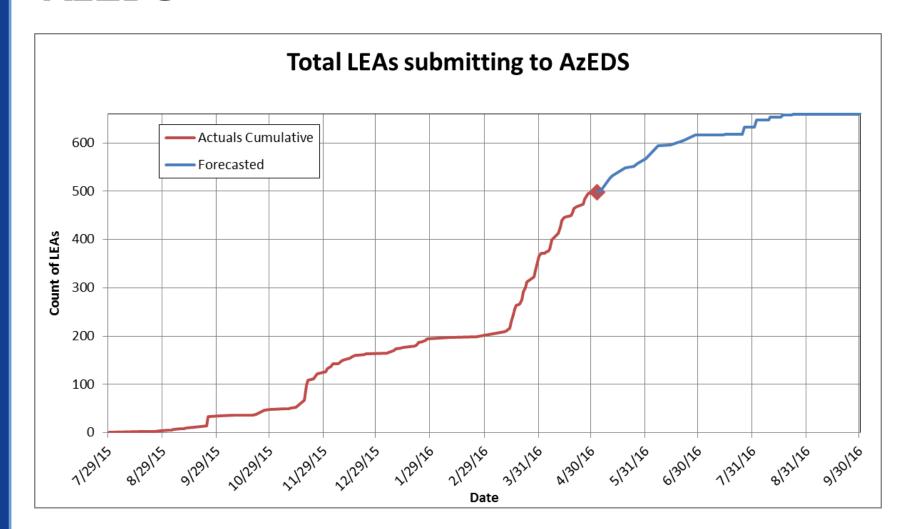


Successful submissions to AzEDS





Migration of LEAs to submitting to AzEDS





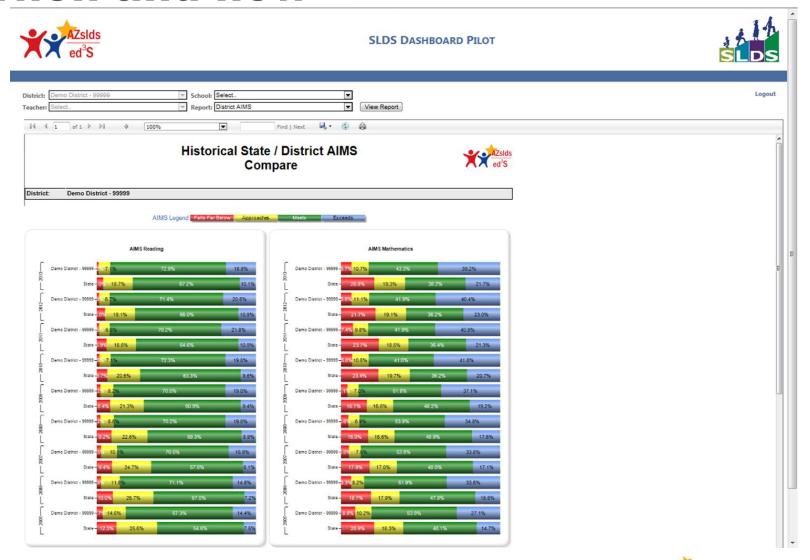
SAIS to AzEDS comparisons

	SAIS	AzEDS
LEAs submitting data to system (59 LEAs are currently transitioning from SAIS to AzEDS)	142	518
Number of rules that may be updated or changed	0	315
Time required to run Integrity (validation of data)	2 days	Less than 4 hours
Time required to run end-of-month Integrity (statewide aggregation)	5 days	Less than 5 hours
Time required to recalculate statewide ADM	5 days	<1 hour
Ability for LEAs to audit transaction history	Not Auditable	Auditable
Total transactions processed in last 30 days	15,000,000	31,000,000





Then and now





Stirling Debbi

AIMS Historical AIMS

District

District

School

Junior High School

Report Parameters

Percent (%) Passing by School
Students Who Need to

Pass
Lower & Upper Results

Stanford 10

Percentile Rank

Percentile Rank By School↓

Lower & Upper Results

EXPLORE/ACT/College Readiness

EXPLORE - Mean Scores ↓ by Subject and School

EXPLORE - Percent (%) 4
Meeting Benchmark
Compared to National

ACT - Average Composite ↓ Scores

ACT - Average Composite ↓ Scores by Subject

ACT - Percent (%)
Meeting College Readiness
Benchmark Comparison

ACT - Percent (%) of Students Meeting College Readiness Benchmarks By Subject

Assessment Reports

Enrollment Reports

▲ Teacher Dashboards

Postsecondary

M Historical AIMS





Disclaimer: Assessment AIMS 2014 data refresh as of June 5th. These data are not verified by ADE for use in any high stakes accountability purposes (A-F, AMO, AMAO, RFP, etc.). Click here for AIMS Calculation Informartion.

Reminder: 2014 AIMS Data is embargoed thru August 4th, 2014.

District: District School: Junior High School

FALLS FAR BELOW APPROACHES MEETS EXCEEDS

AIMS Reading

2014 School	4.8% 17.3%	72.9%	4.9%
2014 District	2.7%7.0%	73.3%	7.0%
2014 Arizona	3.0%19.2%	69.2%	8.6%
2013 School	4.6% 19.3%	69.4%	6.7%
2013 District	3 4%18.9%	70.8%	6.9%
2013 Arizona	4.1% 19.0%	67.5%	9.4%
2012 School	5.9% 16.6%	71.0%	6.5%
2012 District	4.0%18.7%	68.7%	8.5%
2012 Arizona	5.1% 19.4%	65.3%	10.2%
2011 School	4.8%17.7%	67.9%	9.6%
2011 District	4.7% 18.4%	68.2%	8.7%
2011 Arizona	6.0% 18.9%	65.0%	10.2%
2010 School	5.6% 17.3%	69.8%	7.3%
2010 District	6.2% 19.8%	65.2%	8.7%
2010 Arizona	6.8% 20.8%	63.6%	8.8%

AIMS Mathematics

-				
2014 School	22.5%	18.8%	36.1%	22.6%
2014 District	18.8%	21.5%	41.9%	17.8%
2014 Arizona	21.2%	19.8%	38.7%	20.4%
2013 School	22.0%	17.5%	35.2%	25.3%
2013 District	18.8%	22.9%	39.2%	19.0%
2013 Arizona	21.3%	19.6%	38.3%	20.8%
2012 School	21.4%	15.7%	36.3%	26.6%
2012 District	18.0%	20.5%	41.1%	20.4%
2012 Arizona	22.1%	19.4%	36.4%	22.2%
2011 School	19.6%	16.9%	40.7%	22.8%
2011 District	18.3%	19.1%	41.7%	20.8%
2011 Arizona	24.2%	18.8%	36.6%	20.5%
2010 School	17.9%	18.3%	39.8%	24.0%
2010 District	18.6%	20.4%	40.9%	20.1%
2010 Arizona	23.8%	19.9%	36.4%	19.9%

AIMS Writing

2014 School	14.0%	45.2%	40.0%	0.9%
2014 District	8.9%	33.7%	55.0%	2.5%
2014 Arizona	9.4%	34.0%	54.3%	2.3%

AIMS Science

2014 School	13.0%	1.5%	26.3%	39.1%
2014 District	20.6%	21.9%	29.3%	28.1%
2014 Arizona	22.4%	22.4%	28.2%	27.1%

Intermediate

Student-28054 Demo Demo Demo 8chool -1004

Student-25525 Demo Demo Demo School -1001 11

2/27/2014





Moving beyond dated data

- AZDash uses set data points
 - Linked to state aid payment dates
 - Beginning of Year (opt-in), 40th, 100th and end of year
- AzEDS allows LEAs to push data as many times as they want
 - Giving educators near real-time data
 - Powers AZDash with current data to allow teachers and administrators to intervene sooner



SLDS usage

- AZ Report Card
 - March 2016 8,818 unique monthly visitors
 - December 2015 7,544 unique monthly visitors
 (AzMERIT on AZ Report Cards)
- AZDash
 - December 2015 684 unique monthly visitors
 - March 2016 791 unique monthly visitors



Creating Operational Data Stores (ODS)

- Arizona lacked any sort of data standards and chose two before starting development
- Agency adopted CEDS and Ed-Fi data model for ODS
- Benefits of Ed-Fi
 - Consistent ownership and development costs go dramatically down
 - Aligned to the Ed-Fi data tables and stayed close to them as possible for time and ease-of-use
 - Ed-Fi simplifies federal reporting, throws numbers with complexity, as well as aligns easily with Ed Facts, API and dashboards
 - Ease of data transfer from school to agency eliminates data silos and centralizes data retrieval from districts



Benefits of ODS to LEAs

 Educators wanted a one-stop data shop to get a "single source of truth" with data in one location

430 tables allow for sustained growth

 Improved data availability and accuracy improved refreshing from four hours to 30 minutes



Benefits of ODS to ADE

- Allows states to adopt any kind of assessment
- Provides program areas with access to data for business purposes
- Reuse of code quicker is quicker and more efficient
- Flexible system allows for growth as agency grows
- The system will adjust for future rule changes
 - Virtually no development costs will be incurred
- Ed-Fi extended for specific business needs



Benefits to higher education

- ADE's work will provide a blueprint for the future
 - The steps taken with other technology will be replicated
 - Engaging stakeholders, delivering on deadline and within budget are transferrable skills
- The agreement can be synthesized with completed work in other areas
- ADE will begin developing application once financial backing is secured
 - Have attempted to secure money through grants





Future proofing our tech investments

- The move to cloud-based processing/storage has minimized:
 - Security risk
 - Financial investment
 - Falling behind with patches and upgrades
 - Allowed applications to scale with unforeseen growth
 - Allowed ADE to pay only when they develop
 - Created a long-term, economical solution for hardware upgrades
 - Allowed ADE to rent hardware instead of buying it
 - Allowed ADE to avoid building on obsolete hardware



AELAS support costs

- Increased external-facing systems require manpower to perform day-to-day operation and management of existing services
- ADE IT has been capturing costs to maintain complex system like AELAS since FY13
- State legislature has not included funding for ongoing support
 - SAIS fell into disrepair because of lack of funding and technology advancements
 - AELAS will suffer same fate with same treatment
- ADE will not squander the investment



FY2015 support costs

- Support was focused on hardware and software upgrades
 - Infrastructure improvements needed to process expected transactions with new system
- Began to build a help desk structure to handle more complex calls
 - Included creating tiered call routing structure
- \$3,407,485



FY2016 support costs

- Moved existing infrastructure to cloud-based technology
 - Allows for faster processing, more storage/bandwidth at lower costs
 - ADE can use what it needs, when it needs for how long it needs
- Continued tiered support to match incoming tickets with right level of expertise to address
- Ongoing upgrades to incident tracking and management to ensure capability to handle higher volume of transactions
- AZDash maintenance and ADEConnect support
- \$3,689,137



FY2017 support costs

- Ongoing program and financial management
- Network and infrastructure improvements
 - release management, patch administration, systems security, monitoring, server maintenance, administration, and network operations,.
- Continued emphasis on support center
- Hardware maintenance and software license renewals
- \$3,175,000



FY2018 support costs

More than \$6 billion is processed using SAIS

- Must support financial and accountability system
 - + \$38 million of state investment at risk

 Funding that supports AELAS accountability, finance and AZDash has been difficult to obtain



Training and support

- Clarifying roles and responsibilities within ADE
 - Collaboration between School Finance and IT

Call center management software

Training during the summer for all LEAs



Priorities for FY2017

- Complete SAIS student replacement and decommissioning
 - APOR and CHAR will not be completed in FY17
- Build internal connections to AzEDS to reduce burden on LEAs
- Ensure proper support and management of overall project and newly-developed tools
- Continue implementation of opt-in tools to interested LEAs
 - Statewide Student Information System
 - Teaching and Learning Tools
 - Business requirements for AELAS School Finance applications



Remaining AELAS work beyond FY2017

- Most critical is ongoing support for new data system
- New AZDash dashboards based on user input
- AELAS School Finance development and release
- Transition applications from old to new system
- SAIS replacement 'clean up' work based on unknown variables



FY2017 original AELAS request

AELAS Initiative	FY17 Proposed	Project goal
New state aid payment calculator	\$2,500,000	Replace SAIS's 48 poorly-developed manual state aid calculation tools
Overhauled student details databases	\$3,800,000	Replace SAIS's poorly-developed databases that collect student data for state aid payments
Statewide Student Information System	\$500,000	Leverage state contract for student information system resulting in significant savings for districts; Funds used to support system implementation
Student performance reporting tool	\$500,000	Turning data into useable information to improve classroom instruction
TOTAL	\$7,300,000	
ADE IT support	FY17 Proposed	Goals
Project goal Program Management	\$500,000	Interface with local school districts; Financial accountability; Contract oversight; and Software development management
AELAS maintenance and support	\$2,675,000	\$2,675,000 Personnel and software licenses to run system; Without this line item, none of this will function.
TOTAL	\$3,175,000	



FY2018 forecast for financial applications

- Reduced appropriation delays refactoring of APOR and CHAR
 - Core School Finance calculations
 - Discovery and modest design work to be completed
- Prior improvements have allowed ADE to reduce processing time from days to mere minutes

SAIS continues to be operating on borrowed time



AELAS cost estimates for ongoing operations

PROJECT NAME	FY2017	Headcount (FTE)
AZDash Ongoing Support and Maintenance of Student Data Stores and Data Refreshes of AZDash	\$400,000	
ADEConnect Maintain 24 hour access to ADE systems and reports for all stakeholders	\$240,000	2.0
AELAS Program Support Office (PSO) Program Level Management of AELAS Development and Operations	\$700,000	8.0
AELAS Operations Services Ongoing Operations Support of AELAS Infrastructure	\$1,835,000	15.0
OEMS AzEDS Contact and Organization Management Support	\$0	0.0
AELAS Operations subtotal	\$3,175,000	28.0
AELAS Ed-Fi (AzEDS) Support, Maintenance, diagnostics and repairs of software issues	\$465,000	4.0
School Finance Technical support, verification, maintenance of School payment engines	\$535,000	5.0
Prop 301 Funding subtotal	\$1,000,000	9.0
TOTAL	\$4,175,000	37.0



AELAS cost estimates for ongoing operations

PROJECT NAME	FY2018
AZDash Ongoing Support and Maintenance of Student Data Stores and Data Refreshes of AZDash	\$750,000
ADEConnect Maintain 24 hour access to ADE systems and reports for all stakeholders	\$700,000
AELAS Program Support Office (PSO) Program Level Management of AELAS Development and Operations	\$750,000
AELAS Operations Services Ongoing Operations Support of AELAS Infrastructure	\$2,200,000
OEMS AzEDS Contact and Organization Management Support	\$450,000
AELAS Operations subtotal	\$4,850,000
AELAS Ed-Fi (AzEDS) Support, Maintenance, diagnostics and repairs of software issues	\$600,000
School Finance Technical support, verification, maintenance of School payment engines	\$400,000
Required SAIS Replacement Support Funding subtotal	\$1,000,000
TOTAL	\$5,850,000



AELAS cost estimates for completion

PROJECT NAME	FY2017
AZDash No New Development	\$0
AELAS School Finance Completion and warranty of Current Year Funding effort. Discovery and Design of replacement of SAIS's 48 manual state aid calculation tools including APOR/CHAR and budget applications	\$740,000
AELAS Ed-Fi (AzEDS) Full LEA implementation of student data collection system and additional development/release of 150 remaining business rules to support federal/state reporting. Continued development and deployment of data services, migrating more than 80 existing ADE applications to AzEDS.	\$3,305,000
AELAS Opt-in SIS Leverage state contract for student information system resulting in significant savings for districts; Funds used to support system implementation	\$180,000
CEDS Development tasks closely related to AzEDS deliverables in FY2017. Will submit new PIJ for FY 2018 addressing standalone efforts	\$0
TOTAL	\$4,225,000



AELAS cost estimates for completion

PROJECT NAME	FY2018
AZDash Prioritize, Develop, test, and deploy new dashboards to AZDash.	\$500,000
AELAS School Finance Development and implementation of replacement of SAIS's 48 manual state aid calculation tools including APOR/CHAR and Budget applications	\$2,800,000
AELAS Ed-Fi (AzEDS) Develop/deploy new rules for student data collection per statute. Complete discovery, design, development and deployment of support system replacements (Enterprise). Includes 7 unsupported high use SAIS applications	\$3,000,000
AELAS Opt-in SIS No new funding required. Project sustainability estimated in FY 2018	\$0
CEDS Convert and Transition Existing application connections from Enterprise to ODS	\$2,500,000
TOTAL	\$8,800,000



Thank You



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